## What is claimed is:

- 1. A polishing apparatus comprising:
- a top ring for holding a workpiece to be polished;
- 5 and
  - a polishing table movable relatively to said top ring, said polishing table having a polishing surface for polishing the workpiece held by said top ring;

wherein at least one of said top ring and said 10 polishing table reciprocates linearly in a first direction.

2. A polishing apparatus according to claim 1, further comprising a polishing liquid supply device for supplying a polishing liquid to said polishing surface.

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3. A polishing apparatus according to claim 1, further comprising a dresser which reciprocates linearly in a second direction for dressing said polishing surface.

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- 4. A polishing apparatus according to claim 3, wherein a plurality of said dressers are provided in combination with said top ring.
- 5. A polishing apparatus according to claim 1, 25 wherein said top ring reciprocates linearly in a third direction intersecting said first direction.

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- 6. A polishing apparatus according to claim 1, wherein said top ring is rotatable about its axis.
- 7. A polishing apparatus according to claim 1,5 wherein said polishing surface has a groove formed therein for discharging a waste material from said polishing surface.
- 8. A polishing apparatus according to claim 1, wherein said polishing table has a plurality of polishing 10 surfaces having different levels of coarseness.
  - 9. A polishing apparatus according to claim 1, further comprising a linear motor for reciprocating said at least one of said top ring and said polishing table linearly in said first direction.
- 10. A polishing apparatus according to claim 1, wherein said polishing table is arranged to reciprocate linearly in said first direction, and supported by a linear 20 guide under a fluid pressure.